determine fuel economy values. This also applies for fuel economy labeling, as long as the test group meets the criteria described in § 600.115. Vehicles tested over the FTP and HFET cycles with the test fuel specified in 40 CFR 86.113–04(a) under this paragraph (b) must meet the Tier 3 emission standards over those test cycles.

(d) Manufacturers may perform testing with either gasoline test fuel specified in 40 CFR 86.113–04(a) or in 40 CFR 1065.710(b) to evaluate whether their vehicles meet the criteria for derived 5-cycle testing under 40 CFR 600.115; however, all five tests must use test fuel meeting the same specifications.

(e) For IUVP testing under § 86.1845, manufacturers may demonstrate compliance with greenhouse gas emission standards using a test fuel meeting specifications for demonstrating compliance with emission standards for criteria pollutants.

[79 FR 23747, Apr. 28, 2014]

## Subpart C—Procedures for Calculating Fuel Economy and Carbon-Related Exhaust Emission Values

**§ 600.206–12 Calculation and use of FTP-based and HFET-based fuel economy, $CO_2$ emissions, and carbon-related exhaust emission values for vehicle configurations.**

(a) Fuel economy, $CO_2$ emissions, and carbon-related exhaust emissions values determined for each vehicle under § 600.113–08(a) and (b) and as approved in § 600.008 (c), are used to determine FTP-based city, HFET-based highway, and combined FTP/Highway-based fuel economy, $CO_2$ emissions, and carbon-related exhaust emission values for each vehicle configuration for which data are available. Note that fuel economy for some alternative fuel vehicles may mean miles per gasoline gallon equivalent and/or miles per unit of fuel consumed. For example, electric vehicles will determine miles per kilowatt-hour in addition to miles per gasoline gallon equivalent, and fuel cell vehicles will determine miles per kilogram of hydrogen.

(1) If only one set of FTP-based city and HFET-based highway fuel economy values is accepted for a vehicle con-figuration, these values, rounded to the nearest tenth of a mile per gallon, comprise the city and highway fuel economy values for that configuration. If only one set of FTP-based city and HFET-based highway $CO_2$ emissions and carbon-related exhaust emission values is accepted for a vehicle configuration, these values, rounded to the nearest gram per mile, comprise the city and highway $CO_2$ emissions and carbon-related exhaust emission values for that configuration.

(2) If more than one set of FTP-based city and HFET-based highway fuel economy and/or carbon-related exhaust emission values are accepted for a vehicle configuration:

(i) All data shall be grouped according to the subconfiguration for which the data were generated using sales projections supplied in accordance with § 600.208–12(a)(3).

(ii) Within each group of data, all fuel economy values are harmonically averaged and rounded to the nearest 0.0001 of a mile per gallon and all $CO_2$ emissions and carbon-related exhaust emission values are arithmetically averaged and rounded to the nearest tenth of a gram per mile in order to determine FTP-based city and HFET-based highway fuel economy, $CO_2$ emissions, and carbon-related exhaust emission values for each subconfiguration at which the vehicle configuration was tested.

(iii) All FTP-based city fuel economy, $CO_2$ emissions, and carbon-related exhaust emission values and all HFET-based highway fuel economy and carbon-related exhaust emission values calculated in paragraph (a)(2)(ii) of this section are (separately for city and highway) averaged in proportion to the sales fraction (rounded to the nearest 0.0001) within the vehicle configuration (as provided to the Administrator by the manufacturer) of vehicles of each tested subconfiguration. Fuel economy values shall be harmonically averaged, and $CO_2$ emissions and carbon-related exhaust emission values shall be arithmetically averaged. The resultant fuel economy values, rounded to the nearest 0.0001 mile per gallon, are the FTP-based city and HFET-based highway fuel economy values for the vehicle configuration. The resultant $CO_2$

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emissions and carbon-related exhaust emission values, rounded to the nearest tenth of a gram per mile, are the FTP-based city and HFET-based highway $CO_2$ emissions and carbon-related exhaust emission values for the vehicle configuration.

(3)(i) For the purpose of determining average fuel economy under § 600.510, the combined fuel economy value for a vehicle configuration is calculated by harmonically averaging the FTP-based city and HFET-based highway fuel economy values, as determined in paragraph (a)(1) or (2) of this section, weighted 0.55 and 0.45 respectively, and rounded to the nearest 0.0001 mile per gallon. A sample of this calculation appears in Appendix II of this part.

(ii) For the purpose of determining average carbon-related exhaust emissions under § 600.510, the combined carbon-related exhaust emission value for a vehicle configuration is calculated by arithmetically averaging the FTP-based city and HFET-based highway carbon-related exhaust emission values, as determined in paragraph (a)(1) or (2) of this section, weighted 0.55 and 0.45 respectively, and rounded to the nearest tenth of gram per mile.

(4) For alcohol dual fuel automobiles and natural gas dual fuel automobiles the procedures of paragraphs (a)(1) or (2) of this section, as applicable, shall be used to calculate two separate sets of FTP-based city, HFET-based highway, and combined values for fuel economy, $CO_2$ emissions, and carbon-related exhaust emissions for each configuration.

(i) Calculate the city, highway, and combined fuel economy, $CO_2$ emissions, and carbon-related exhaust emission values from the tests performed using gasoline or diesel test fuel.

(ii) Calculate the city, highway, and combined fuel economy, $CO_2$ emissions, and carbon-related exhaust emission values from the tests performed using alcohol or natural gas test fuel.

(b) If only one equivalent petroleum-based fuel economy value exists for an electric vehicle configuration, that value, rounded to the nearest tenth of a mile per gallon, will comprise the petroleum-based fuel economy for that configuration.

(c) If more than one equivalent petroleum-based fuel economy value exists for an electric vehicle configuration, all values for that vehicle configuration are harmonically averaged and rounded to the nearest 0.0001 mile per gallon for that configuration.

[76 FR 39551, July 6, 2011]

§ 600.207–12  Calculation and use of vehicle-specific 5-cycle-based fuel economy and $CO_2$ emission values for vehicle configurations.

(a) Fuel economy and $CO_2$ emission values determined for each vehicle under § 600.114 and as approved in § 600.008(c), are used to determine vehicle-specific 5-cycle city and highway fuel economy and $CO_2$ emission values for each vehicle configuration for which data are available.

(1) If only one set of 5-cycle city and highway fuel economy and $CO_2$ emission values is accepted for a vehicle configuration, these values, where fuel economy is rounded to the nearest 0.0001 of a mile per gallon and the $CO_2$ emission value in grams per mile is rounded to the nearest tenth of a gram per mile, comprise the city and highway fuel economy and $CO_2$ emission values for that configuration.

(2) If more than one set of 5-cycle city and highway fuel economy and $CO_2$ emission values are accepted for a vehicle configuration:

(i) All data shall be grouped according to the subconfiguration for which the data were generated using sales projections supplied in accordance with § 600.209–12(a)(3).

(ii) Within each subconfiguration of data, all fuel economy values are harmonically averaged and rounded to the nearest 0.0001 of a mile per gallon in order to determine 5-cycle city and highway fuel economy values for each subconfiguration at which the vehicle configuration was tested, and all $CO_2$ emissions values are arithmetically averaged and rounded to the nearest tenth of gram per mile to determine 5-cycle city and highway $CO_2$ emission values for each subconfiguration at which the vehicle configuration was tested.

(iii) All 5-cycle city fuel economy values and all 5-cycle highway fuel